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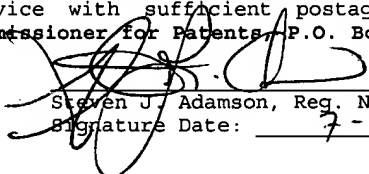
OFFICE OF PETITIONS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application	)	<u>REISSUE</u>
	)	<u>PATENT APPLICATION</u>
Inventor(s): Kenneth N. Bates	)	
	)	
Reissue Serial No.: 09/628,942	)	Art Unit: 3662
	)	
Original Patent No.: 5,787,049	)	Examiner: Lobo, I.
	)	
Original Patent Issued: 07/28/98	)	
	)	
Reissue Filed: 07/28/00	)	
	)	
Title: Acoustic Wave Imaging	)	
Apparatus and Method	)	

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited in the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Arlington, VA, 22313-1450 on 7-29-03.

 (Attorney Signature)  
Steven J. Adamson, Reg. No. 32,776  
Signature Date: 7-29-03

RENEWED PETITION TO REVIVE UNDER 37 CFR 1.137(a)

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir or Madam:

On June 3, 2003, Applicant submitted a Petition to Revive under 37 CFR 1.137(a). On June 30, 2003, a Decision Dismissing the Petition was issued by the Office of Petitions (first page attached). Applicant requests reconsideration of this Decision.

Reconsideration is requested on the grounds that the regulations (37 CFR §1.173) as written or as applied by the Examiner are not sufficiently clear as to permit a practitioner to respond in a "certain" manner.

The issue at hand is a formal one - the appropriate use of underlying and bracketing in claims added during a reissue application. Substantively, the claims of the present reissue application are in condition for allowance.

Section 1.173(b) and 1.173(d) are straightforward on their face and Applicant believes that they have been complied with. The Examiner contends that all new claims (those not present in the original patent) must be underlined in their entirety throughout prosecution. On page 2, paragraph 1, of the Advisory Action mailed February 26, 2003, it is written:

"Note that ALL NEW CLAIMS (in this case 24-38[sic - actually 40]) must be underlined throughout the prosecution of a reissue application."

A problem arises when it is desired to amend a newly submitted claim. The purpose of the underlining and bracketing procedure is to readily indicate what changes have been made relative to previously submitted text. If the claims are underlined in their entirety throughout prosecution and an applicant desires to delete text from such a claim, the result is a claim submission format in which the bracketed text is underlined, which leads to an inconsistent designation - is the text in the brackets to be deleted or are the brackets to be inserted?

It is this lack of clarity in the regulations as written or as applied that has led to abandonment of the above-identified application. This uncertainty remains today.

Submitted herewith are claims 24-40 (the claims added during the reissue) in their present state, underlined in their entirety and with appropriate parenthetical legends as required by §1.173, though the issue of previously bracketed deletions is not addressed.

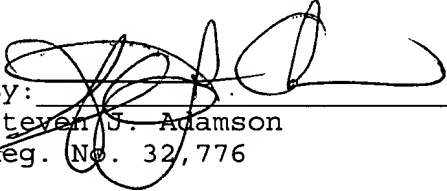
Applicant asks the Office of Petitions to recognize the lack of consistency or rather lack of clarity between the text of the regulations and the directions provided by the Examiner. Both a literal interpretation of the regulations and the interpretation of the Examiner have now been complied with. Applicant asks that the Office of Petitions recognize this lack of clarity, direct the appropriate persons to re-write sections of §1.173 or the corresponding MPEP section to resolve the clarity issue, grant this petition, and pass the above-identified case on to issue.

Thank you for your time and consideration of this matter.

Should you have any questions or comments regarding this matter, you are kindly requested to contact the undersigned. The Commissioner is hereby authorized to charge any underpayment or credit any overpayment associated with this communication to Deposit Account No. 01-0272.

Respectfully submitted,

Date: 7-29-03

By:   
Steven J. Adamson  
Reg. No. 32,776

Steven J. Adamson, PC  
P.O. Box 5997  
Portland, OR 97228  
Tel: 503.248.0100  
Fax: 503.248.0105  
*sja@ip-rights.com*  
Customer No. 25,866



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STEVEN J. ADAMSON  
P O Box 5997  
PORTLAND, OR 97228



Paper No. 27

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**OFFICE OF PETITIONS**

In re Application of  
Kenneth N. Bates  
Application No. 09/628,942  
Filed: July 28, 2000  
Title of Invention: ACOUSTIC WAVE  
IMAGING APPARATUS AND METHOD

**OFFICE OF PETITIONS**  
DECISION DISMISSING  
PETITION

This is a decision on the petition, filed June 6, 2003, under 37 CFR 1.137(a), to revive the above-identified application.

The petition is **dismissed**.

Any request for reconsideration of this decision must be submitted within TWO (2) MONTHS from the mail date of this decision. Extensions of time (and fee) under 37 CFR 1.136(a) are permitted. The reconsideration request should include a cover letter entitled, "Renewed Petition under 37 CFR 1.137(a)"

This application became abandoned for failure to timely and properly reply to the final Office action, mailed October 2, 2002, which set a shortened statutory period of three months for reply. Petitioner filed an Amendment in response to the final Office action on December 30, 2002. That response, however, was not deemed to place the application in condition for allowance, as was stated in an Advisory Action mailed to Petitioner, on January 6, 2003. Petitioner filed a Request for Reconsideration, along with a request for a one (1) month extension of time to reply to the final Office Action pursuant to 37 CFR 1.136(a). In response to the Request for Reconsideration, a second Advisory Action was mailed on February 26, 2003. That Advisory Action informed Petitioner that claims 24 - 38 were allowed, but that the Amendment was not in compliance with 37 CFR 1.173(c). Petitioner filed a response to the February 26, 2003 Advisory Action on April 2, 2003; however, that response failed to place the application in condition for allowance because Petitioner still had not complied with 37 CFR 1.173. Petitioner was so notified in a third Advisory Action, mailed on April 16, 2003. Accordingly, this application became abandoned on April 3, 2003. A Notice of Abandonment was mailed on May 5, 2003.

In response to the abandonment, Petitioner files the instant petition wherein Petitioner avers that the Patent Office caused an unnecessary two month delay by initially disallowing the claims in the December 30th Amendment, and subsequently allowing the claims (in response to the Request for Reconsideration). Petitioner acknowledges that the second Advisory Action addressed the form of the Amendment, and that he was unsure of what the Examiner was requesting. The response filed April 2, 2003 "contained multiple variations of the requested supplemental paper - evidencing confusion as to the format of the appropriate response." Petition p.2. Because the delay was in part a result of Office error, and in part due to a good-faith misunderstanding of Petitioner, Petitioner avers the delay was unavoidable.



Below please find reissue claims 24-40 underlined in their entirety, without bracketed deletions and with appropriate parenthetical expressions ("amended", "twice amended," etc.), pursuant to 37 CFR 1.173(b).

24 (twice amended). An acoustic energy transmitting apparatus, comprising:

a plurality of electro-acoustic transducer elements arranged in an M row by N column array, where M and N are positive integers and at least one of M and N is greater than one;

control circuit for propagating row and column control signals for each of said M rows and said N columns, each control signal having a frequency and a phase component; and

wherein each transducer element is configured to function as an active device so as to achieve a combining at each transducer element of the frequency and phase components of the row and column control signals for that transducer element in such a manner as to provide a focused acoustic signal at a given focal distance and direction from said array.

25. The apparatus of claim 24, wherein the electric signal to acoustic signal relationship and vice versa of each transducer element is non-linear.

26 (amended). The apparatus of claim 24, wherein said control circuit includes a control channel for each of said M rows and a control channel for each of said N columns, and wherein the number of control channels is fewer than the number of transducer elements.

27. The apparatus of claim 24, wherein said control circuit is configured such that the row and column signals for at least some of the transducer elements includes a coded signal.

28 (amended). The apparatus of claim 27, wherein M equals one.

29 (amended). An acoustic energy transmitting apparatus, comprising:

a plurality of electro-acoustic transducer elements arranged in an M row by N column array, where M and N are positive integers and at least one of M and N is greater than one;

M row control lines, each coupled to the transducer elements in one of said M rows;

N column control lines, each coupled to the transducer elements in one of said N columns;

control circuit for propagating row and column control signals for each of said M rows and said N columns, a control signal for each transducer element being a combination of one of said row control signals and one of said column control signals;

a plurality of active devices, each coupled to one of said transducer elements for combining the row control signal and the column control signal of that transducer element;

wherein said transducer elements, control circuit and active devices are configured so as to achieve a combining at each transducer element of the row and column control signals for that transducer element in such a manner as to provide a focused acoustic signal at a given focal distance and direction from said array; and

wherein each of said electro-acoustic transducer elements is configured within said apparatus to function in a non-linear manner in operation.

30 (twice amended). An acoustic energy receiving apparatus, comprising:

a plurality of electro-acoustic transducer elements arranged in an M row by N column array;

control circuit for propagating row and column control signals for each of said M rows and said N columns, each row and column control signal having a frequency and a phase component; and

wherein said transducer elements and said control circuit are configured so as to achieve a combining at each transducer element of the frequency and phase components of the row and column control signals for that transducer element with a resultant electrical receive signal, corresponding to an acoustic signal incident on that transducer element, in such a manner as to modify the frequency and phase of the transducer element's electrical receive signal so as to achieve the coherent

combination of the modified electrical receive signals from all of said plurality of transducer elements; and

a filter that filters spurious frequencies output from the transducer elements;

wherein said transducer elements, control circuit and filter are configured to achieve focused acoustic signal reception at a given distance and direction from said array.

31. The apparatus of claim 30, wherein said transducer elements and said control circuit are configured to achieve dynamic focused acoustic signal reception.

32. The apparatus of claim 31, wherein the electric signal to acoustic signal relationship and vice versa of each transducer element is non-linear.

33 (amended). The apparatus of claim 30, wherein said filter includes a matched filter.

34. The apparatus of claim 33, wherein said matched filter includes a conjugate of a coded signal.

35 (amended). The apparatus of claim 29, wherein M equals one.

36 (twice amended). The apparatus of claim 30, further comprising a circuit that generates image data from the coherent combination of transducer element receive signals.

37 (amended). The apparatus of claim 30, wherein said control circuit includes a control channel for each of said M rows and a control channel for each of said N columns, and wherein the number of control channels is fewer than the number of transducer elements.

38. An acoustic energy receiving apparatus, comprising:  
a plurality of electro-acoustic transducer elements each capable of generating an electrical receive signal in response to an incident

acoustic wave and arranged in an M row by N column array, where M and N are positive integers and at least one of M and N is greater than one;

control circuit for propagating row and column control signals for each of said M rows and said N columns, the control signal for each transducer element being a combination of the row and column control signals for that transducer element;

wherein said row and column control signals are configured, for each transducer element, such that when combined with the electrical receive signal of that transducer element the electrical receive signal is modified in such a manner as to permit the simultaneous processing of the modified electrical receive signals from said plurality of transducer elements;

a first circuit that combines the modified electrical receive signals of each of said transducer elements to form an array output signal; and

a second circuit coupled to said first circuit that generates image data from said array output signal.

39. The apparatus of claim 38, wherein M equals one.

40. The apparatus of claim 24, wherein each transducer element includes non-linear electro-acoustic material.